Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of Part 90 of the	)	PR Docket No. 93-61
Commission's Rules to Adopt	)	
Regulations for Automatic	)	
Vehicle Monitoring Systems	)	

To: The Commission

OPPOSITION TO PETITIONS FOR RECONSIDERATION

THE PART 15 COALITION

Henry Goldberg
Henrietta Wright
W. Kenneth Ferree

GOLDBERG, GODLES, WIENER & WRIGHT
1229 Nineteenth Street, NW
Washington, DC 20036
(202) 429-4900

Its Attorneys

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TABLE OF CONTENTS

SUMMARY

Although the Coalition believes that the Commission should reconsider various aspects of the Report and Order, the petitions of Pinpoint Communications, Inc., MobileVision, L.P., Southwestern Bell Mobile Systems, Inc., Uniplex Corporation, Amtech Corporation, and AirTouch Teletrac are without merit and should be denied.

First, the expansion of grandfathered systems proposed by petitioners would exacerbate interference problems by increasing the number and scope of grandfathered AVM systems operating outside of the Commission's LMS/Part 15 spectrum sharing rules. In addition, the proposed expansion will undercut the Commission's spectrum auctions and lead to warehousing of spectrum.

Second, Uniplex's suggestion that multilateration LMS systems be allowed to employ 300 watt wideband forward links is completely unjustified and, if adopted, would undermine the Commission's goal of facilitating the shared use of the 902-928 MHz band by Part 15 technologies, which are particularly vulnerable to wideband forward links.

Third, petitioners' contention that the Commission's field testing requirement unlawfully elevates the status of Part 15 technologies simply is in error. The field testing requirement merely ensures that only those LMS systems that can share spectrum efficiently should be authorized to use the band. The testing requirement has nothing to do with the priority of authorized services in the band.

The presumption of noninterference that the Commission adopted for Part 15 technologies likewise does not change the priority of services operating in the 902-928 MHz band. The Commission is required to protect licensed services from what it deems to be excessive radio interference. The presumption of noninterference merely defines, in part, what will and will not constitute excessive interference to LMS systems.

Fourth, MobileVision's request that the rules be changed to allow for expanded LMS messaging services should be rejected. The Commission has made it clear that LMS is not to be a general messaging service. To the extent that general messaging is useful or desirable for mobile customers, those services may be, and are being, provided by other radio services operating in other frequency bands. LMS

providers who wish to provide these services should acquire spectrum elsewhere under the same terms and conditions as the entities with whom they will compete.

Fifth, non-multilateration LMS systems should not be allowed to exceed either the height or power restrictions adopted in the Report and Order. The Commission set aside the 909.750-921.750 MHz frequencies for use by non-multilateration LMS and Part 15 operations, separate and apart from the bands designated for multilateration systems. The proposal to expand the height and power of non-multilateration systems threatens this "safe harbor" of the 902-928 MHz band and is not justified.

Lastly, although the Coalition does not take a position on the specific emissions mask that is appropriate for LMS services, no justification has been offered for relaxing the standards of Section 90.209(m). At bottom, petitioners' complaint is that their systems cannot be made to comply with the Commission's emissions mask requirements. Petitioners have put the cart before the horse. LMS systems must be designed to comply with the rules, not vice versa.

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OPPOSITION TO PETITIONS FOR RECONSIDERATION

In accordance with Section 1.429 of the Commission's rules, the Part 15 Coalition ("the Coalition") submits this opposition to portions of several of the petitions for reconsideration filed in the above-referenced proceeding.[1] Although the Coalition believes that the Commission should reconsider various aspects of the Report and Order, the petitions of Pinpoint Communications, Inc. ("Pinpoint"), MobileVision, L.P. ("MobileVision"), Southwestern Bell Mobile Systems, Inc. ("SBMS"), Uniplex Corporation ("Uniplex"), Amtech Corporation ("Amtech"), and AirTouch Teletrac ("Teletrac") are without merit and should be denied.

I. DISCUSSION

A. Broadening Grandfathering Will Undermine The Commission's Auctions Of LMS Licenses, Encourage Spectrum Warehousing, And Contribute To An Increase In Spectrum Congestion In The 902-928 MHz Band.

Several of the AVM/LMS providers, or would-be providers, have asked that the grandfathering provisions set out in the Report and Order be liberalized in one

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[1] Amendment of Part 90 of the Commission's Rules to Adopt Regulations for Automatic Vehicle Monitoring Systems, Report and Order, PR Docket No. 93-61 (rel. Feb. 6, 1995) ("Report and Order").

respect or another. Pinpoint, MobileVision, and Uniplex posited that grandfathered systems freely should be permitted to add sites and expand their coverage areas.[2] SBMS complained that, if licensed but unconstructed systems are to be grandfathered, then so too should systems for which an application was pending as of the grandfathering date.[3]

The requests of these petitioners ignore the context in which the AVM grandfathering rules were adopted. Grandfathering is not the norm when new spectrum allocations are made. Indeed, the very notion of grandfathering is that equity requires, in certain extreme instances, exceptions to a rule of general applicability. In this case, the Commission grandfathered certain AVM systems because it was confronted with an intractable problem: A few AVM licensees, who had been authorized to operate in the 902-928 MHz band on an interim basis, had, in reliance on their interim authority, developed systems in a band of spectrum that is already heavily used by Part 15 technologies.[4] As a result, when the Commission adopted new rules to allow for the expansion of LMS services, it felt bound by notions of "fair play" to permit those systems already authorized under the interim rules to continue to operate, for only a limited period of time, under the existing rules.[5]

Although the grandfathered systems may pose a more serious threat to efficient spectrum use than LMS systems designed, constructed, and operated in accordance with the new rules, grandfathering currently licensed AVM systems represents a practical concession to the needs of these licensees. Although this

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2 Pinpoint Petition for Reconsideration at 13-16; MobileVision Petition for Reconsideration at 7-9; Uniplex Petition for Reconsideration at 5-6.
3 SBMS Petition for Reconsideration at 19-20.
4 Report and Order at ¶¶ 3-4.
5 Id. ¶¶ 61-64

rationale is unassailable to a point,[6] it does not, by any means, justify the expansion of the grandfathering rules sought by the petitioners noted above. The rule changes proposed by those petitioners would exacerbate interference problems by increasing the number and scope of AVM systems operating outside of the Commission's LMS/Part 15 spectrum sharing rules.

Indeed, the proposals to liberalize the grandfathering provisions highlight the fact that these grandfathered AVM systems undermine other aspects of the Commission's band sharing rules. For that reason, it is essential that the Commission clarify that Section 90.361's presumption of noninterference applies to grandfathered AVM systems.[7] Absent such protection, individual Part 15 technologies may be adversely effected long before true LMS systems begin operation. This risk will be increased if grandfathered systems are permitted to expand their coverage area or add new sites.

There are also important public policy reasons for rejecting the suggestions offered by the proponents of expanded grandfathering. As SBMS points out in its petition, the more generous the Commission's grandfathering provisions are, the less successful its LMS auctions will be.[8] As SBMS also points out, the tension between generous grandfathering provisions and viable spectrum auctions may contribute to spectrum warehousing.[9] In short, not only is there no justification for the proposed liberalization of the grandfathering provisions, but such proposals

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[6] The Coalition agrees with the Ad Hoc Gas Distribution Utilities Coalition ("Ad Hoc") to the extent that it questions the need for a three-year modification period for grandfathered (and constructed) systems. See Ad Hoc Petition for Reconsideration at 10.

[7] See Part 15 Coalition Petition at 12-13.

[8] See SBMS Petition at 14.

[9] See id. at 16-17.

would have a deleterious effect on other users of the 902-928 MHz band and on the success of the Commission's LMS auctions.

B. Petitioners Have Offered No Justification For Easing The Restrictions On Wideband Forward Links.

Throughout this proceeding, the Coalition and others have argued that the use of wideband forward links by multilateration LMS ("M-LMS") systems will be devastating to many valuable Part 15 technologies.[10] In contrast, would-be LMS providers never have demonstrated convincingly that wideband forward links are necessary. Indeed, the need for wideband forward links is belied by current M-LMS systems operating with forward links limited to 250 kHz. Thus, the Coalition has petitioned the Commission to prohibit the use of wideband forward links entirely or, in the alternative, to limit the antenna height and duty cycles of systems employing wideband forward links.[11]

Despite the record evidence that M-LMS wideband forward links are unnecessary and undesirable in this band, Uniplex has asked that the Commission allow for full 300 watt power transmission by M-LMS systems employing wideband forward links.[12] Uniplex justifies its request principally on the basis that the power restriction, in combination with the restrictions on the relocation of grandfathered sites, will "severely reduce[] the potential for the emergence of a diversity of technologies in this band paricularly (*sic*) those employing [wideband forward links]."[13] This reasoning, however, misapprehends the spectrum sharing principles that underlie the Report and Order.

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10 See, e.g., Part 15 Coalition Petition at 4-7.
11 Id.
12 Uniplex Petition at 6.
13 Uniplex Petition at 1.

If the Commission were allocating unused spectrum exclusively for LMS, it might be appropriate to develop rules that would provide for a "diversity of technologies" in the band. In this case, however, the Commission is attempting to create conditions under which LMS systems can share the 902-928 MHz band with existing services. In order to maximize spectrum efficiency and protect incumbent and new users, the Commission developed sharing rules that require concessions from all users of the band. The 30 watt power limitation for wideband forward links is one such concession. To the extent that this limitation will circumscribe the development of some LMS services, it is necessary to ensure that users of unlicensed Part 15 technologies, which are particularly vulnerable to wideband forward links, are not unduly burdened.[14]

Indeed, the Uniplex suggestion largely is rendered moot by the Commission's testing requirements. Although it is unclear precisely what manner of tests are required and what standard of interference to Part 15 operations would be "acceptable,"[15] it is at least be certain that 300 watt wideband forward links would cause unacceptable interference to Part 15 technologies, which are limited to one watt of power. Allowing 300 watt wideband forward links would thus unnecessarily complicate the Commission's LMS rules.

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[14] See Part 15 Coalition Petition at 4; CellNet Data Systems, Inc. ("CellNet") Petition for Reconsideration at 4-5; Ad Hoc Petition at 12-15.

[15] See Part 15 Coalition Petition at 5.

C. The Field Testing Requirement For LMS Systems And The Presumption Of Noninterference For Certain Part 15 Technologies Are Lawful And Justified.

1. The Field Testing Requirement Does Not Effect The Priority Of Services Authorized To Use The 902-928 MHz Band.

As the Coalition noted in its petition for reconsideration, the substance of the field testing requirement is undercut by the failure of the Commission to provide procedures that will govern the required testing.[16] Thus, the Coalition suggested several procedural modifications to the field testing requirements.

SBMS and Pinpoint, on the other hand, argue that the Commission's pre-authorization testing requirement unlawfully elevates Part 15 operations to a higher status than licensed LMS services.[17] Pinpoint further asserts that, if testing is required, it also should be required of Part 15 devices to see if they cause harmful interference to LMS systems.[18] SBMS and Pinpoint do not correctly perceive the import of the Commission's testing requirements and the realities of Part 15 operations.

To ensure the successful coexistence of M-LMS and Part 15 technologies, the Commission "condition[ed] grant of each MTA multilateration license on the licensee's ability to demonstrate through actual field tests that their systems do not cause unacceptable levels of interference to Part 15 devices."[19] Thus, the testing requirement has nothing to do with the priority of services in the band once they are authorized. Part 15 technologies still are secondary to any authorized service in

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16 Part 15 Coalition Petition at 15-16.
17 See SBMS Petition at 7-8; Pinpoint Petition at 21.
18 Pinpoint Petition at 23.
19 Report and Order ¶ 82.

the band. What the field testing requirement does is to ensure that only M-LMS systems that share spectrum efficiently are authorized to use the band.

Pinpoint's suggestion that Part 15 operations should be subject to similar testing requirements ignores the reality of the market for Part 15 technologies. Part 15 operations are not confined to a few users operating from fixed or easily identifiable transmit locations. Part 15 technologies are consumer devices, such as cordless telephones, which typically are widely dispersed over a metropolitan area. In addition, they operate at extremely low power and usually over short distances. As a result, it is not only unlikely that most Part 15 operations would "seriously degrade[], obstruct[] or repeatedly interrupt[]"[20] an LMS system — which is the basis for the presumption of non-interference in the rules — but it is completely impractical to require consumers to test their devices against any local LMS operator as a condition of use.

For similar reasons, the Coalition and others have suggested that a central testing authority be identified by the Commission to represent Part 15 interests and to coordinate with LMS providers to test LMS systems. The Coalition has volunteered to fill that role and others have supported that suggestion.[21] Indeed, as several parties have noted, the Commission's rules leave many questions unanswered regarding the procedural and substantive requirements of the LMS testing rules.[22] The Coalition is prepared to work with the Commission and

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20 47 C.F.R. § 15.3(m).

21 See Part 15 Coalition at 16; Comments of the Alarm Industry Communications Committee at 4.

22 See Part 15 Coalition Petition at 15; CellNet Petition at 6; Metricom, Inc. & Southern California Edison Co. ("Metricom") Petition for Reconsideration at 8-10; UTC Petition for Reconsideration at 11-13; Ad Hoc Petition at 18. These petitioners argue that the testing procedures should include, among other things, notice to Part 15 manufacturers and users of pending LMS tests, a definition of "unacceptable

representatives of the LMS industry to develop and implement the necessary testing procedures.[23]

2. The Presumption Of Noninterference Recognizes That Low Power Part 15 Devices Will Not Cause Harmful Interference To LMS Operations In The Vast Majority Of Cases.

Section 90.361 establishes parameters within which Part 15 devices must operate in order to be entitled to a presumption of noninterference to LMS systems. Subparagraph C of Section 90.361 provides that a Part 15 device with an outdoor antenna will be presumed to be noninterfering if: the directional gain of the antenna does not exceed 6 dBi (or transmitter output power is reduced below 1 watt by the amount by which the directional gain exceeds 6 dBi); and either the antenna is 5 meters or less above ground, or the antenna is 5 to 15 meters above ground and transmitter output power is further reduced.[24]

As the Coalition noted in its petition for reconsideration, "this 'negative definition' of harmful interference does not provide effective protection against interference to LMS nor does it enable unambiguous identification of an interfering emitter."[25] Thus, the Coalition advocates the elimination of the antenna height and power restrictions contained in Section 90.361.

Several would-be LMS providers object to this presumption of noninterference in any event. Uniplex states that the presumption could lead to

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interference," participation by part 15 interests in LMS testing, procedures to challenge test results, methods of interpreting test results, and OET oversight.

[23] Cf. Amendment of the Commission's Rules to Establish New Personal Communications Services. Fourth Memorandum Opinion and Order, GEN Docket No. 90-314 (rel. May 12, 1995) (designating UTAM, Inc., to manage the transition of the 1910-1930 MHz band from the Private Operational Fixed Microwave Service to unlicensed Personal Communication Service operations).

[24] Report and Order ¶ 36.

[25] Part 15 Coalition Petition at 13.

cases of intentional interference by users of compliant Part 15 equipment in order to extract "greenmail" from LMS providers.[26] SBMS and Pinpoint contend that the presumption of noninterference constitutes a unlawful rewrite of Part 15, and, along with MobileVision, they ask that the presumption be made rebuttable.[27] Once again, however, these parties misunderstand the purpose of the rule changes and ignore marketplace realities.

The presumption of noninterference does not change the priority of services operating in this band and it does not, therefore, constitute a rewrite of Part 15. Under the Communications Act, the Commission may "make reasonable regulations governing the interference potential of [radio frequency] devices" in order to reduce harmful interference to radio communications.[28] As a necessary antecedent to such regulations, the Commission must determine what constitutes such interference. Although the Commission has provided a definition of "harmful interference" in Part 15,[29] there is no reason that the Commission cannot, in other Parts of its rules, further refine the contours of what constitutes interference that is objectionable with regard to specific services.

The presumption of noninterference set forth in new Section 90.361 is just such a refinement. Section 90.361 does not, as some have claimed, reverse priorities among licensed and unlicensed services or rewrite Part 15, it merely deals with what is and is not objectionable interference in the context of LMS services. Such a determination clearly was contemplated in the rulemaking proceeding and is within the Commission's statutory authority.

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26 Uniplex Petition at 7-8.
27 SBMS Petition at 9; Pinpoint Petition at 22-23; MobileVision Petition at 13.
28 47 U.S.C. § 302(a).
29 See 47 C.F.R. § 15.3(m).

Moreover, the Commission's determination of the permissible level of interference from unlicensed technologies to LMS systems is quite reasonable. Part 15 devices are ubiquitous. In virtually any geographic area in which an LMS provider would establish a system, there will be countless numbers and types of Part 15 technologies. As the record in this proceeding demonstrates, the vast majority of such Part 15 operations pose no interference threat whatever to the operation of an LMS system. The presumption of noninterference in Section 90.361 recognizes this reality. Thus, there is no justification for making the presumption of non-interference rebuttable and allowing LMS providers to make individual claims of interference against the majority of these low power (1 watt maximum) Part 15 technologies. Not only would this undercut any protection that the presumption is intended to provide, but it would also place inordinate administrative burdens both on the Commission and the parties involved.

Indeed, the presumption of interference should be broader than it is in the Report and Order. Specifically, as many parties to this proceeding have noted, the antenna height restrictions are arbitrary and unrelated to the actual threat (or lack thereof) of interference from Part 15 operations to LMS systems.[30] The elimination of these restrictions would not significantly increase the potential level of interference to LMS systems, but it would benefit the segment of the Part 15 industry that relies upon light and utility pole mounted antennae for unlicensed operations.

D. Allowing LMS Systems To Provide Voice Messaging Services Would Unnecessarily Burden The 902-928 MHz Band.

Under the rules adopted in the Report and Order, LMS systems generally are prohibited from interconnecting with the public switched network ("PSN"). This interconnection prohibition was intended to ensure that LMS services are not used

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[30] See, e.g., Part 15 Coalition Petition at 13; UTC Petition at 13-17.

for "general messaging purposes."[31] Nonetheless, the rules provide for two exceptions to the PSN prohibition: (1) real-time interconnection with the PSN will be permitted for "emergency communications related to a vehicle or a passenger in a vehicle...to or from entities eligible in the Public Safety and Special Emergency Radio Services or a system dispatch point"; and (2) messages to or from the PSN may be stored by the LMS provider and later forwarded to their destination.[32] Moreover, LMS systems will be permitted to transmit real-time, non-interconnected voice messages, "so long as they are related to the location or monitoring functions of the system."[33]

Although the two exceptions to the interconnection prohibition are quite broad and, if not amended as suggested in the Coalition's petition for reconsideration, will likely swallow the rule,[34] MobileVision nonetheless urges the Commission to "allow LMS providers with (*sic*) unrestricted interconnection capability with the PSN" because the very viability of LMS depends upon it.[35] In addition, MobileVision argues that there should be no content limitation on the type of messages that LMS services may carry.[36] These two proposed changes to the Commission's LMS rules reflect a disturbing trend among several of the would-be LMS providers to attempt to leverage the LMS rules to accommodate new services never contemplated for the shared 902-928 MHz band and thus should be rejected.

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31 Report and Order ¶ 26.
32 Id. ¶ 27.
33 Id. ¶ 26.
34 See Part 15 Coalition Petition at 7-12.
35 MobileVision petition at 2-6. Indeed, MobileVision urges the Commission to allow market forces to determine the breadth and variety of services that will be provided by LMS systems.
36 Id. at 2-4.

All of the radio technologies using this shared band must make concessions to accommodate the others. No single service can be all things to all users. In recognition of this, the Commission has made it clear that LMS service is not to be a general messaging service. To the extent that general messaging is useful or desirable for mobile customers, those services may be, and are being, provided by other radio services operating in other frequency bands.[37] LMS providers who wish to provide these services should acquire spectrum elsewhere under the same terms and conditions as the entities with which they will compete.[38]

MobileVision is correct in one respect. The content restrictions on LMS messaging are "vague and ambiguous, will prove difficult to regulate....will always be subjective and, without an eavesdropping 'content police' function, will be unenforceable."[39] This fact, however, rather than indicating the need to eliminate content restrictions, highlights the danger of allowing any type of voice messaging in this service.

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[37] As the Commission has noted, LMS is intended to be only one element of a complex and varied "collection of advanced radio technologies" that will comprise the Intelligent Vehicle Highway System ("IVHS") of the future. Report and Order ¶ 5. And, "[n]ot all of these services...require or rely on the use of the 902-928 MHz band." Id. Thus, for instance, the Commission is encouraging the development of new technologies above 40 GHz to integrate new navigation, location, and highway signaling services. Amendment of Parts 2 and 15 of the Commission's Rules to Permit Use of Radio Frequencies Above 40 GHz for New Radio Applications, NPRM, ET Docket No. 94-124, (rel. Nov. 8, 1994).

[38] MobileVision asserts that the interconnection restrictions will put LMS at a "competitive disadvantage with other providers and particularly with unlicensed Part 15 devices." MobileVision Petition at 4. Aside from tacitly admitting that location services alone will not support LMS use of the spectrum, the MobileVision comparison between LMS and Part 15 devices is absurd. None of the reasons for limiting PSN interconnection by high powered, wideband, wide area services applies to extremely low power, short range Part 15 operations.

[39] MobileVision Petition at 2-4 (footnote omitted); see also Part 15 Coalition Petition at 7; UTC Petition at 5-9; Ad Hoc Petition at 15-16.

As the Coalition noted in its petition for reconsideration,

> [t]o the extent that LMS systems become a source of voice traffic, interference to unlicensed technologies will increase. Standard LMS reverse link traffic typically poses minimal risk to Part 15 technologies, in part because the transmissions tend to involve short, bursty data traffic. Voice traffic, on the other hand, including nonreal-time voice mail messaging, requires longer transmissions, and, thus, creates more interference and spectrum congestion.[40]

Allowing LMS systems to provide voice messaging services, constrained only by a vague and concededly unenforceable content limitations, will undermine the balance struck by the Commission in adopting the LMS rules. For similar reasons, the "emergency use" and "store and forward" exceptions to the interconnection requirement must be eliminated.

As several parties have recognized, there simply will be no effective means of monitoring or administering an "emergency use" exception to the PSN interconnection restriction. "LMS users, with a telephone keypad in reach, will be tempted to use the service as a substitute mobile radio service, whether or not they are instructed that it is only to be used to contact Public Safety eligibles."[41] Ironically, emergency situations are precisely those in which interconnected voice communications are least required. In a true emergency situation, the last thing the vehicle operator needs is to be occupied dialing numbers or verbally explaining his

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[40] Part 15 Coalition petition at 7-8; see also SBMS Petition at 11 ("permitting lengthy conversations on LMS spectrum will increase the probability of harmful interference with Part 15 devices and with other LMS systems").

[41] Id. at 10.

predicament.[42] A single or multiple "panic button" feature would provide far superior emergency communication capability.[43]

The "store and forward" exception also threatens to "eviscerate the voice service ban."[44] As SBMS pointed out, even the delay occasioned by the digitizing of cellular transmissions might well satisfy the store and forward exception to the LMS interconnection prohibition as it is currently framed.[45] Thus, this exception, in combination with the emergency use exception, virtually guarantees that LMS systems will be used for general messaging, in direct contravention of the Commission's intent. To avoid this result, the Commission should "require enough of a delay that two-way, person-to-person conversation over the system would be impossible (*e.g.*, one minute)."[46]

E. The Height And Power Restrictions On Non-Multilateration Systems Should Not Be Changed.

Amtech asks that N-LMS systems should be permitted to exceed either the height or power restrictions adopted in the Report and Order, provided that the field strength of the systems do not exceed 90 dBuV/m at a distance of one mile from the site, measured at a height of six feet.[47] Although it is unclear from the petition, it appears that Amtech used the most generous propagation model available to derive this result. This may suggest that Amtech intends to provide new and undefined

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42 Even assuming that the operator remains composed enough to provide an adequate explanation, many emergency situations would make such explanations impractical or impossible (*e.g.*, operator incapacitated or carjacking in-progress).
43 See Part 15 Coalition Petition at 8; UTC Petition at 9-10; Ad Hoc Petition at 15 n.22.
44 SBMS Petition at 9 (capitalization omitted).
45 Id. at 10.
46 Part 15 Coalition Petition at 12.
47 Amtech Petition at 9-12.

services in this band, which is precisely the danger that the Coalition foresaw in its petition for reconsideration.[48]

The Commission has defined N-LMS systems as those that "employ any of a number of non-multilateration technologies to transmit information to and/or from vehicular units."[49] The Commission envisions N-LMS technologies performing automated toll collection, railroad monitoring, and other "tag-reader" functions. Such "tag-reader" systems can easily transmit over short distances (*i.e.*, in the immediate vicinity of highway toll plazas, rail sidings, and other rights-of way) and can easily use very low power (e.g., one watt) in an "active" system to accomplish this reading. Amtech's "passive" system, on the other hand, uses more power because the tag that is to be read does no have an independent power source, but the "reflection" necessary dictates short distances.[50] Thus, N-LMS systems cannot efficiently share frequencies with M-LMS systems.[51]

In recognition of this fact, the Commission set aside the 909.750-921.750 MHz frequencies as a safe harbor from interference generated by M-LMS systems for Part 15 technologies as well as N-LMS.[52] Unfortunately, the Commission's definition of N-LMS systems does not limit these systems, either functionally or technically, to "tag-reader" applications, and although allowing them up to 30 watts of power. The rules, therefore, leave open the possibility that high-power, wide-area services can be provided under the guise of N-LMS. Amtech proposes to allow N-LMS systems to exceed even this power limit and, therefore, its proposal should be rejected.

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48 See Part 15 Coalition Petition at 16-18.
49 47 C.F.R. § 90.7.
50 See Comments of Amtech at 17, PR Docket No. 93-61 (filed June 29, 1993).
51 See Report and Order ¶ 46.
52 See Id. ¶¶ 24, 39.

F. No Convincing Justification Has Been Offered For Relaxing The Emissions Mask Requirements Of Section 90.209(m).

Several would-be LMS providers have asked that the Commission modify the emissions mask requirements of new Section 90.209(m).[53] The alternative emission mask specifications proposed by the LMS proponents are relaxed versions of the standards used in the Domestic Fixed Radio Service and the Private Operational Fixed Microwave Service.[54] Although the Coalition does not take a position on the specific emissions mask that would be appropriate for LMS services, it does note that no justification has been offered for relaxing the standards used in these other services.

Emissions mask limits protect against out-of-band interference. Significantly, there are important limitations other than emissions mask limits that reduce out-of-band interference in the Domestic Fixed Radio Service and the Private Operational Fixed Microwave Service, including path coordination, antenna gain limits, and antenna positioning requirements. None of these other limitations apply to LMS systems, nor can they because the transmissions involved in LMS services are to and from mobile units. Moreover, the Commission has partitioned the 902-928 MHz band for LMS systems into eight sub-bands. To the extent that services in any of these sub-bands are permitted to bleed into nearby sub-bands, harmful interference and spectrum congestion can be expected to increase. Thus, the emissions masks limits are far more important to protect against out-of-band interference by LMS systems than they are in other fixed services.[55]

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53 See MobileVision petition at 9-10; SBMS Petition at 21-23; Pinpoint Petition at 17-20.

54 See MobileVision Petition at Annex I; Pinpoint Petition at 18-20; AirTouch Teletrac Petition at 2-8, referencing 47 C.F.R. §§ 21.106, 24.133, 94.71..

55 Whether or not the Commission modifies the emissions mask standards for out-of-band emissions within the 902-928 MHz band, all spurious and harmonic

At bottom, petitioners' complaint is that their systems cannot be made to comply with the Commission's adopted emissions mask requirements and that the Commission's rules should, therefore, be changed. These petitioners have put the cart before the horse. The Commission's rules are intended to provide for the most efficient use possible of this shared frequency band. LMS systems must be designed to comply with the rules, not vice versa.

II. CONCLUSION

For the reasons set forth herein, the Coalition urges the Commission to deny the petitions of Pinpoint Communications, Inc., MobileVision, L.P., Southwestern Bell Mobile Systems, Inc., Uniplex Corporation, Amtech Corporation, and AirTouch Teletrac.

Respectfully submitted,

THE PART 15 COALITION

By: /s/ Henrietta Wright
Henry Goldberg
Henrietta Wright
W. Kenneth Ferree

GOLDBERG, GODLES, WIENER & WRIGHT
1229 Nineteenth Street, NW
Washington, DC 20036
(202) 429-4900

Its Attorneys

May 24, 1995

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emissions from LMS transmitters that fall outside of the 902-928 MHz should be required to meet the specifications of current Section 90.209(m) (55 + 10 log (P) to help reduce interference from LMS transmitters to other bands and services.

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing Opposition to Petition for Reconsideration of The Part 15 Coalition was sent by first-class mail, postage prepaid, this 24th day of May, 1995, to each of the following:

John J. McDonnell, Esq.
Reed Smith Shaw & McClay
1200 18th Street, N.W.
Washington, D.C. 20036

Theresa Fenelon, Esq.
Pillsbury Madison & Sutro
1050 Connecticut Avenue., N.W.
Suite 1200
Washington, D.C. 20036

David E. Hilliard
Edward A. Yorkgitis, Jr.
Michael K. Baker
Wiley, Rein & Fielding
1776 K Street, N.W.
Washington, D.C. 20006

George L. Lyon, Jr.
Lukas, McGowan, Nace & Gutierrez, Chartered
1111 19th Street, N.W.
Suite 1200
Washington, D.C. 20036

Jeffrey L. Sheldon
UTC
1140 Connecticut Avenue, N.W.
Suite 1140
Washington, D.C. 20036

McNeil Bryan
Uniplex Corporation
2905 Country Drive
St. Paul, MN 55117

Louis Gurman
Jerome K. Blask
Nadja S. Sodos
Gurman, Kurtis, Blask & Freedman, Chartered
1400 Sixteenth Street, N.W.
Suite 500
Washington, D.C. 20036

Lawrence J. Movshin
Wilkinson, Barker, Knauer & Quinn
1735 New York Avenue, N.W.
Washington, D.C. 20006

Allan R. Adler
Roy R. Russo
Cohn and Marks
1333 New Hampshire Avenue, N.W.
Suite 600
Washington, D.C. 20036-1573

John A. Prendergast
Blooston, Mordkofsky, Jackson & Dickens
2120 L Street, N.W., Suite 300
Washington, D.C. 20037

Henry M. Rivera
Larry S. Solomon
Ginsburg, Feldman & Bress
1250 Connecticut Avenue, N.W.
Washington, D.C. 20036

Robert B. Kelly
W. Ashby Beal, Jr.
Kelly & Povich, P.C.
1101 30th Street, N.W.
Suite 300
Washington, D.C. 20007

Deborah Lipoff, Esq.
Rand McNally & Company
8255 North Central Park
Skokie, Illinois 60076

Christopher D. Imlay
Booth, Freret & Imlay
1233 20th Street, N.W.
Suite 204
Washington, D.C. 20036

Glen Wilson
Safetran Systems Corporation
10855 7th Street
Rancho Cucamonga, CA 91730

Gary M. Epstein
Raymond B. Grochowski
Latham & Watkins
1001 Pennsylvania Avenue, N.W.
Washington, D.C. 20004

Kelly D. Dahlman
Texas Instruments Incorporated
13510 North Central Expressway
P.O. Box 655474, MS 241
Dallas, TX 75243

Andrew D. Lipman
Catherine Wang
Swidler & Berlin, Chartered
3000 K Street, N.W.
Suite 300
Washington, D.C. 20007

Gordon M. Ambach
Council of Chief State School Officers
One Massachusetts Avenue, N.W.
Suite 700
Washington, D.C. 20001-1431

Henry Goldberg
Goldberg Godles Wiener & Wright
1229 Nineteenth Street, N.W.
Washington, D.C. 20036

/s/ Laurie A. Gray
Laurie A. Gray